REMARKS

Claims 1 – 30 are pending. Claims 1; 10 and 19 - 21 have been cancelled. Claims 2, 4 – 18, 22 – 25 and 28 - 29 have been amended. New claims 31 - 35 have been added. No new matter has been added. Reconsideration is requested.

Claims 1 – 13, 15 – 21 23 – 28 and 30 were rejected under 35 U.S.C. 102(e) as being anticipated by Dansky et al. (US patent 6,342, 823). Applicant has amended claims 2, 4 – 18, 22 – 25 and 28 - 29 and added new claims 31 – 35 to better define what applicants consider to be their invention.

Applicants would like to thank Examiner Levin for the July 31, 2003 phone interview with the Applicant's representative Suzanne Erez, registration number 46, 688.

Claims 1, 10 and 19 - 22 have been cancelled and thus, their rejection is now moot. However, to advance the prosecution of this application, Applicants elects to respond to the Examiner's remarks as in reference to new claims 31 and 32.

Dansky et al. describe an "analysis tool, ... based on the net topology obtained from actual product chip layout, the tool transfers..." [col.3, ll36-49]. See also col.5, ll 18-36, "Fig. 10 shows the schematic of the analysis tool" As noted, after the chip logic is designed, and the circuits are interconnected, and the wiring layout is obtained, only then are the critical nets identified. Further noted in claim 1 to Dansky et al. "providing a wiring plan for an integrated circuit having interconnected circuits and transmission liens; identifying a group of constituent parts of the integrated circuit..."

As such, the tool of Dansky et al. is used for analysis after the chip layout is complete and does not describe "means for designing a high level circuit design at least including a ... one or more critical interconnect wire topologies; means for designing a schematic design at least including ... one or more critical interconnect wire models; and means for designing a physical layout ... and said one or more critical interconnect wire topologies".

In contrast to Dansky et al, new claim 32 recites: A method for designing integrated circuits (IC), said method comprising the steps of:

(a) defining a chip architecture and a floor plan;

(b) identifying one or more critical interconnect lines, and defining transmission line topologies for design of said critical interconnect lines;

(c) determining a schematic design of said IC from said chip architecture floor plan and said critical interconnect line topologies; and

(d) defining a physical layout of said IC at least from said chip architecture floor plan and said critical interconnect line topologies.

The present invention thus identifies and defines the topologies at the earliest stages of the design process (page 9, lines 15 – 18; page 10, lines 14 -16; page 11, line 18 and page 13, lines 9 – 11). The identified and defined topologies can then be used during the physical layout (page 8, lines 8 – 100 and transformed into library elements during extraction (page 12, lines 16 – 19), minimizes the need for post-layout treatment of critical lines, such as described by Dansky et al.

Thus, applicants respectfully submit that claims new claims 31 and 32 are patentable over Dansky et al. In view of the patentablity of new claims 31 and 32, claims 23 – 28, and 30, dependant therefrom are also believed to be patentable.

The arguments for the rejection of independent currently amended claims 2 and 6 are similar to the arguments for new claims 31 and 32. Claims 2 and 6 have been amended to better define what applicants consider to be their invention. Dansky et al. does not generate or design critical interconnect lines topologies, rather analyzes them and synthesizes them from data gathered from the product chip layout. [col. 2, ll 41 – 49; Fig 8 and associated explanation; Fig 10 and associated explanation]. Thus, applicants respectfully submit that currently amended claims 2 and 6 are patentable over Dansky et al. In view of the patentablity of claims 2 and 6, claims 3 – 13 dependant therefrom are also believed to be patentable.

The arguments for the rejection of independent currently amended claims 15 and 17 are similar to the arguments for new claims 2 and 6. Claims 15 and 17 are directed to software products reflecting the subject matter of claims 2 and 6. Thus, applicants respectfully submit that currently amended claims 15 and 17 are patentable over Dansky et al. In view of the patentablity of claims 15 and 17, claims 16, and 18 dependant therefrom are also believed to be patentable.

Claim 14, 22 and 29 are rejected under 35 U.S.C. as being unpatentable over Dansky et al. Claim 22 has been cancelled and thus, the rejection of claim 22 is now moot. Dansky et al was filed 26 Aug 1998, but published only on 29 January 2002. Therefore, Dansky et al would qualify as prior art against the present patent application only via 35 U.S.C. 102(e). Applicant notes, however, that at the time the present invention was made, the inventor was an employee of International Business

Machines Corporation (IBM) and was subject to an obligation to assign the invention to IBM. Such an assignment has been duly recorded in the USPTO. Dansky et al is likewise assigned to IBM. Therefore, under the provisions of 35 U.S.C. 103(c), Dansky et al is disqualified as prior art against the present patent application, and the rejection of the claims under 35 U.S.C. 103(a) should be withdrawn.

Applicants believe that the above amendments and remarks are fully responsive to all the objections and grounds of rejections by the examiner. In view of the foregoing amendments and remarks, the applicants respectfully submit that all the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fee associated with this paper to deposit account No. 09-0468.

Respectfully Submitted,

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